PRS26

DIRECT COSTS OF PNEUMONIA IN THE UNITED STATES: AN ANALYSIS OF 2008 MEDICAL EXPENDITURE PANEL SURVEY (MEPS) DATA

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OBJECTIVES: To estimate annual health care utilization and costs of pneumonia across age cohorts in the United State (US) from an all-payer perspective. **METHODS:** A retrospective cross-sectional study was conducted using the 2008 Medical Expenditure Panel Survey (MEPS) database, a nationally representative annual survey of the civilian non-institutionalized population of the US. Pneumonia patients were identified as those with a Clinical Classification Code for pneumonia (code with 122). Resources used and expenditures incurred by patients with pneumonia that were directly attributable to pneumonia treatment (physician office visits, emergency room visits, outpatients visits, inpatient visits, other medical visits, and medications) were estimated. Health care costs per year per person (PYPP) were assessed across five age cohorts (<5, 5-<18, 18-<50, 50-<64, and ≥65 years old) and reported in 2008 US dollars. **RESULTS:** A total of 297 patients (representing 3.1 million persons) reported using medical resources or incurring expenditures due to pneumonia. Direct medical costs attributable to pneumonia were estimated at $2,763 (standard error [SE] ± 344) per patient. Approximately 86% ($2,394) of this estimate was generated by inpatient hospitalizations for pneumonia, which were experienced by 26.9% of pneumonia patients, with an average of 0.31 admissions per patient. Physician office visits and home health visits were the next largest categories of expenditure, contributing $153 (5.5%) and $113 (4.1%), respectively. By age cohort, mean attributable costs PYPP for patients <5 (n=47), 5-<18 (n=38), 18-<50 (n=41), 50-<64 (n=108), and ≥65 years old (n=63) were $2,166 (±1043), $579 (±119), $1,747 (±$888), $2,983 (±556), and $4,201 (±553), respectively (p< 0.05). **CONCLUSIONS:** This study provides an overview of clinical and economic burden of pneumonia in the US. Pneumonia-attributable expenditures were considerable, strongly driven by high inpatient hospitalization cost. In addition, patients aged ≥ 65 years had highest expenditures of pneumonia among all age cohort.

PRS27

TRENDS IN UK SMOKING CESSATION PRESCRIPTION EXPENDITURE OVER TIME - A THIN DATABASE STUDY

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OBJECTIVES: In the UK, smoking cessation prescriptions (SCPs) include bupropion, nicotine replacement therapy (NRT) and varenicline, where NRT and bupropion were available around 2000 and varenicline in 2006, with NRT being relatively less expensive. This study evaluates the trends in SCP expenditure from the national payer perspective. **METHODS:** From patients >18 years, annual SCPs were obtained between January 1, 2000 - December 31, 2009 from The Health Improvement Network (THIN) database, which holds anonymised longitudinal UK primary care data from >500 practices. Drug prices came from the British National Formulary March 2010 to estimate real growth in expenditure. Expenditure trends were disaggregated by prescription frequency; treatment prevalence, defined as the number of patients receiving a SCP in THIN; SCPs per patient treated; and average drug expenditure per SCP. Sensitivity of 5% was applied towards expenditure. **RESULTS:** Total number of SCPs was 9,706 in 2000 and estimated 131,466 in 2009. SCP expenditure were estimated at 7,416,741£ (range:7,045,904-£;7,787,578£) in 2000 (2010 £ values) and 77,904,026£ in 2009 (range:74,008,825-£; 81,799,228£) reflecting a 950.4% real rate of increase. Bupropion prescription frequency was 70.8% in 2000 decreasing to 2.2% in 2009, NRT frequency was 29.2% in 2000 peaking at 94.4% in 2006 and declining to 65.1% in 2009, and varenicline frequency was 16.8% in 2007 increasing to 32.8% in 2009. Treatment prevalence rose from 0.3% in 2000 to 2.0% in 2009, while the average annual SCPs per patient treated increased from 1.5 to 3.0. The average SCP expenditure per SCP decreased to 22.2£ in 2006, however increased to 25.8£ in 2009. **CONCLUSIONS:** The expenditure increase reflects increase in treatment prevalence and average annual SCPs per patient treated. Furthermore, the introduction of varenicline may have impacted recent expenditures as the average SCP expenditure per SCP increased at varenicline introduction, suggesting a product shift towards more expensive SCPs.

PRS28

ADHERENCE TO CURRENT GUIDELINES FOR CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN SUBJECTS TREATED WITH COMBINATION OF LONG-ACTING B2-AGONIST (LABA), LONG-ACTING MUSCARINIC ANTAGONIST (LAMA) OR INHALED CORTICOSTEROIDS (ICS)

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OBJECTIVES: To estimate the potential cost savings and reduction in exacerbations by following guideline recommendations in subjects being treated for COPD with the combination of LABA, LAMA or ICS. **METHODS:** Subjects were identified with a diagnosis for COPD using ICD-9 codes between January 1, 2004 to December 31, 2007. The index date was based on first prescription of a LAMA+LABA, LAMA+LABA/ICS, or LABA+ICS. Based on pulmonary function test (PFT) data within 30 days of the index date, subjects were classified as adhering or non-adhering to guidelines. Chi-square and t-test were conducted to determine the differences among cohorts. **RESULTS:** A total of 365 subjects were identified as adhering or non-adherent to guidelines based on their PFT data. Oxygen were significantly higher in LAMA plus LABA/ICS and lower in LABA/ICS as compared to LAMA plus LABA cohort (p<0.05). Also, number of office visits and hospital admissions were significantly higher in LAMA plus LABA/ICS compared to LAMA plus LABA cohort. The mean number of prescriptions for antibiotics and prednisone was higher in LAMA plus LABA/ICS cohort. The highest mean number of baseline exacerbations was observed in LAMA plus LABA/ICS group (12.9) with 6.06 in LABA plus ICS group and 7.76 in LAMA plus LABA group. 31% of the subgroup received COPD medications consistent with guidelines was associated with cost savings of $5,889 for LAMA plus LABA, $3,330 for LABA+ICS, and $10,217 for LAMA plus LABA/ICS cohorts. The LAMA plus LABA (1.3 vs. 2.9) LABA plus ICS (2.78 vs. 3.57), and LAMA plus LABA/ICS (-0.82 vs. 3.62) cohorts had lower mean change in exacerbations in adhering group versus non-adhering group. **CONCLUSIONS:** Adherence to current GOLD guidelines is associated with lower costs and fewer exacerbations in subjects with moderate to severe COPD for LAMA plus LABA, LABA plus ICS and LAMA plus LABA/ICS groups. AbstractsAbstracts

PRS29 EVALUATION OF STABLE COPD MEDICATION COSTS IN UKRAINE BASED ON GPS' PRESCRIPTIONS HABITS SURVEY RESULTS

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OBJECTIVES: Chronic Obstructive Pulmonary Disease (COPD) is a major cause of chronic morbidity and mortality throughout the world. There was not any reliable information about its prevalence, morbidity and mortality in Ukraine until 2009. **METHODS:** We analyzed the data about COPD from the first report of Ukrainian Center of Medical Statistics. Than we calculated, the number of COPD cases needed the basis in 2009 and the approximate costs for COPD basis therapy based on data from the survey of Ukrainian GP's prescription habits in treatment of stable COPD. **RESULTS:** According to the Ukrainian Center's of Medical Statistics data in 2009 prevalence of COPD in Ukraine amounted to 998.7 per 100,000 (377,267 persons), morbidity – 79.2 per 100,000 (29,928 persons), mortality – 29.5 per 100,000 (11,121 persons). The number of persons with COPD needed the basis were 336,218 (total number of cases excluding new patients and deaths). According to our survey of Ukrainian GP's prescription habits for stable COPD basis 56.8% of COPD patients were given by fenoterol/ipratropium with annual costs per patient €120, 10.2% - tiotropium with €606.2 annually, 9.1% - fenoterol with €103.3, 7.9% - salbutamol with €27.5, 7.2% - fluticazone/salmeterol with €185, 6.8% - theophylline with €48.7, 2% - budesonide/formoterol €187.5 per patient annually. Therefore, in 2009 in Ukraine the expenditures for basis treatment of 336,218 COPD patients' with fenoterol/ipratropium, tiotropium, fenoterol, salbutamol, fluticazone/salmeterol, theophylline budesonide/formoterol were €22,916,618.88, €20,789,165.86, €3,160,550.07, €730,433.61, €4,478,423.76, €1,113,419.53, €1,260,817.50, respectively. Moreover, the total basis medications costs in 2009 could be €54,449,429.20 (€161.94 per patient). **CONCLUSIONS:** The study results showed that basis medication costs per COPD patient in Ukraine could correspond with costs in several EU countries. And we need to provide comparative cost studies for medications reimbursement-system creation.

PRS30

IDENTIFYING THE PATIENT POPULATION WHERE TREATMENT OF SEVERE ALLERGIC ASTHMA WITH OMALIZUMAB (XOLAIR®) EXHIBITS OPTIMAL COST-EFFECTIVENESS IN AUSTRALIA

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OBJECTIVES: In Australia omalizumab (OM) is indicated for moderate-to-severe allergic asthma. Two randomised controlled trials conducted in patients with severe asthma compared optimised asthma therapy (OAT) (includes maximal inhaled therapy) versus OM+OAT. This analysis was to identify a patient subgroup in which clinical need, comparative costs and effectiveness of OM is greatest. **METHODS:** A Markov model incorporating local treatment algorithms and data from the trials was developed. Patient subgroups were defined according to baseline use of maintenance oral corticosteroids (MOCS), Asthma Control Questionnaire (ACQ-5) and Asthma Quality-of-Life Questionnaire (AQLQ) scores, FEV&rtf-inf-start;1&rtf-inf-end;, exacerbation history and combinations of these. Costs and effectiveness of OM+OAT were compared with OAT alone. OM was continued only while patients exhibited treatment response. Various definitions of response were examined to optimise continuation criteria. Model parameters included: clinically significant asthma exacerbations; hospital admissions; emergency visits; change in MOCS dose; impact of MOCS on risk of certain chronic conditions; ACQ-5, AQLQ and EQ5D utility index scores. The model estimated numbers of clinically significant severe asthma exacerbations, deaths, life-years and QALYs gained due to OM. **RESULTS:** OM+OAT showed optimal cost-effectiveness in patients uncontrolled on or intolerant to MOCS, with a baseline ACQ-5 ≥2.0 or AQLQ ≤5.0. Response for OM continuation was optimally defined as a reduction in ACQ-5 ≥0.5 or ≥25% reduction in MOCS dose without deterioration in ACQ-5. These patients benefitted most from OM because they had severe disease, and were able to reduce exacerbations and MOCS dose and associated MOCS risks. The low baseline AQLQ score